

CLAIMS

1. An apparatus for engaging a first tubular and a second tubular in a wellbore, the apparatus comprising:

 a tubular body formed on the first tubular, having an inner surface and an outer surface, the tubular body being expandable radially outward into contact with an inner wall of the second tubular by the application of an outwardly directed force supplied to the inner surface of the tubular body;

 grooves formed on the tubular body; and

 at least one profile cut formed in the outer surface of the tubular body.

2. The apparatus of claim 1, whereby the at least one profile cut is constructed and arranged to close upon expansion of the tubular body.

3. The apparatus of claim 1, wherein the at least one profile cut is formed at a depth less than a depth of the grooves.

4. The apparatus of claim 3, wherein the grooves formed are substantially filled with a pliable material.

5. The apparatus of claim 1, wherein the at least one profile cut is substantially filled with a pliable material.

6. The apparatus of claim 1, wherein the grooves are formed in a pattern and the pattern of the grooves is a continuous pattern about the circumference of the body, the grooves intersecting to form a plurality of substantially identical shapes.

7. The apparatus of claim 6, wherein the substantially identical shapes comprise diamonds.

8. The apparatus of claim 6, wherein the at least one profile cut are formed on the surface of the plurality of substantially identical shapes, whereby the at least one

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profile cut intersects the grooves.

9. The apparatus of claim 1, further comprising gripping means formed on the outer surface of the tubular body for further increasing friction between the first and second tubulars upon expansion of the tubular body.

10. The apparatus of claim 9, wherein the gripping means define raised members extending outward from the outer surface of the body.

11. The apparatus of claim 10, wherein the raised members define inserts interdisposed in the pattern of the grooves.

12. The apparatus of claim 11, wherein the inserts are press-fitted into preformed apertures in the outer surface of the tubular body.

13. The apparatus of claim 12, wherein the inserts are fabricated from a hardened metal alloy.

14. The apparatus of claim 12, wherein the inserts are fabricated from a ceramic material.

15. The apparatus of claim 12, wherein the raised members defines a plurality of buttons having teeth.

16. An apparatus for engaging a first tubular and a second tubular in a wellbore, the apparatus comprising:

a tubular body formed on the first tubular, having an inner surface and an outer surface, the tubular body being expandable radially outward into contact with an inner wall of the second tubular by the application of an outwardly directed force supplied to the inner surface of the tubular body;

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a gripping means formed on the outer surface of the tubular body for further increasing friction between the first and second tubulars upon expansion of the tubular body;

a plurality of grooves formed on the tubular body; and

a plurality of profile cuts formed in the outer surface of the tubular body, wherein the plurality of profile cuts intersect the grooves.

17. The apparatus of claim 16, wherein grooves are formed on the outer surface or inner surface of the tubular body or combinations thereof.

18. The apparatus of claim 16, wherein the plurality of profile cuts are formed at a depth less than the plurality of grooves.

19. The apparatus of claim 16, wherein the plurality of grooves and the plurality of profile cuts are formed in a pattern.

20. The apparatus of claim 19, wherein the pattern of the plurality of grooves is a continuous pattern about the circumference of the body, the plurality of grooves intersecting to form a plurality of substantially identical shapes.